

ABSTRACT OF THE DISCLOSURE

A method for outward and upward growth of a hydraulic fracture along a well bore sandpacked annulus and over a selected rock formation interval along a length of a well bore. The fracture is created along the interval encompassing a multitude of oil and gas saturated sand formations and intervening silt and shale formations for more efficiently producing oil and/or gas from the formations. The method includes creating a linear sourced, cylindrical, stress field by maneuvering an intersection of a fluid friction controlled first pressure gradient and a second pressure gradient of a frac pad fluid traversing through a well bore sandpacked annulus and a hydraulic frac in the adjacent rock formation interval. The first pressure gradient is created by controlling a fluid flow rate of the frac pad fluid through a portion of the sandpacked annulus located above the top of an upwardly propagating hydraulic fracture. The first pressure gradient is substantially greater than an average gradient of rock formations frac-extension pressure gradient. The second pressure gradient is equal to or less than the average frac-extension pressure gradient and is created by a friction loss of a volume flow rate of the frac pad fluid flowing through combined parallel paths of the sandpacked annulus and the hydraulic fracture propagating outward and upward in the adjacent rock formation.